

A Online Appendix:

The effect of job loss on labor supply, wealth, and spousal labor supply for older workers

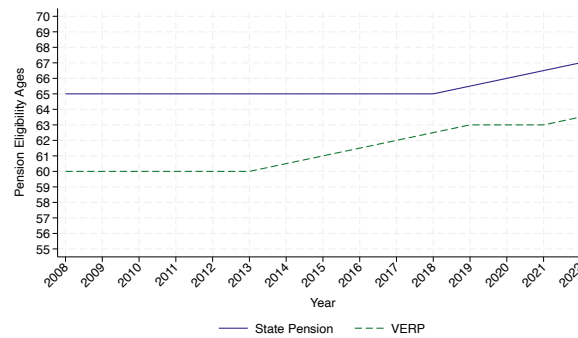
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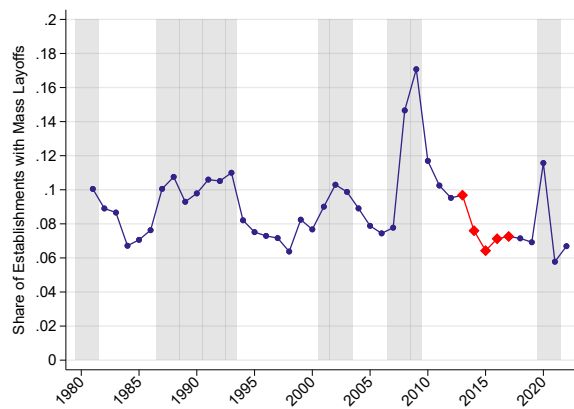
A.1 Graphs

Figure A.1: Pension eligibility ages over time



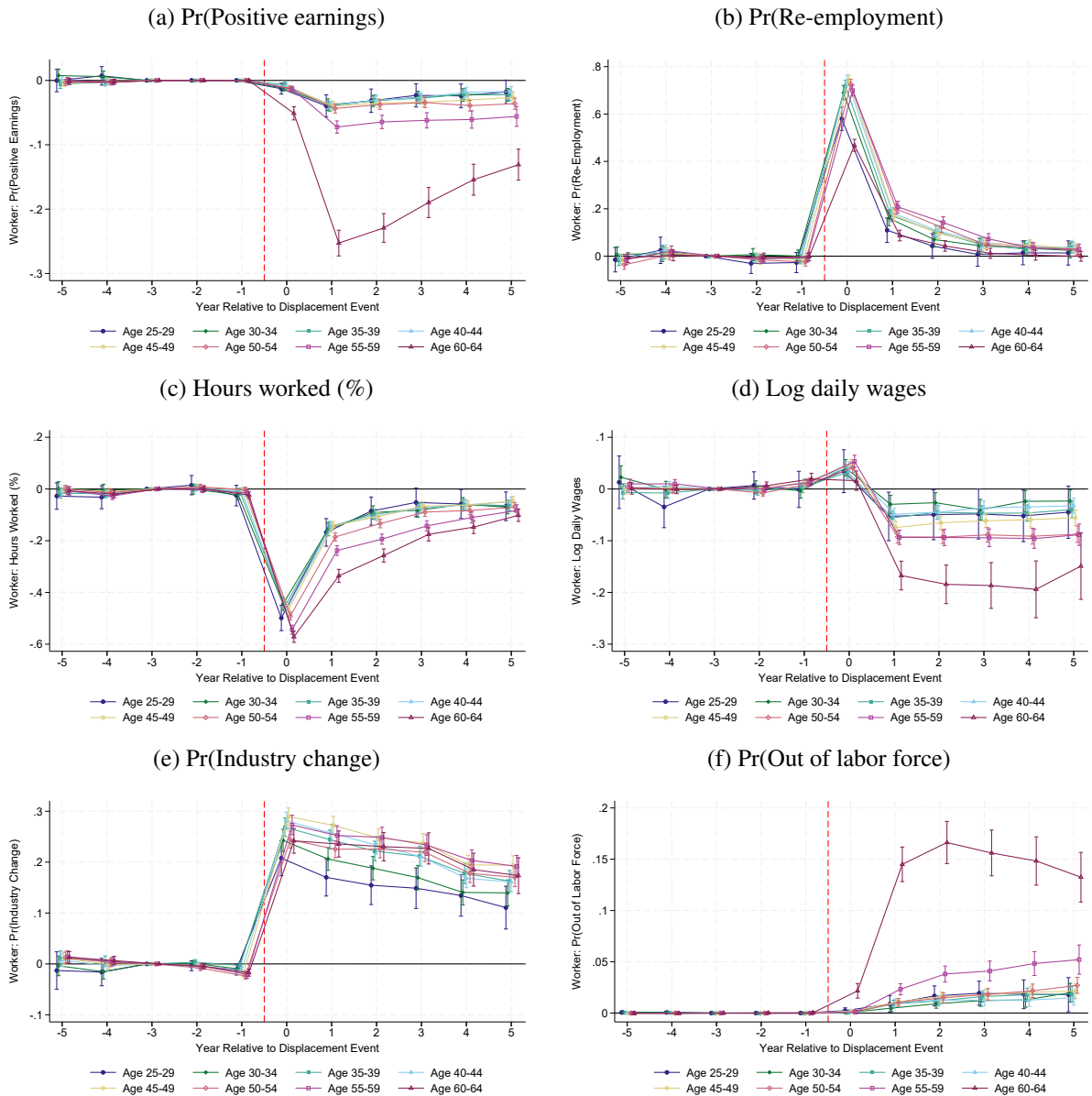
Notes: This figure displays the voluntary early retirement pension (VERP) eligibility age and the state pension eligibility age in Denmark for the years 2008-2022.

Figure A.2: Mass layoffs over time



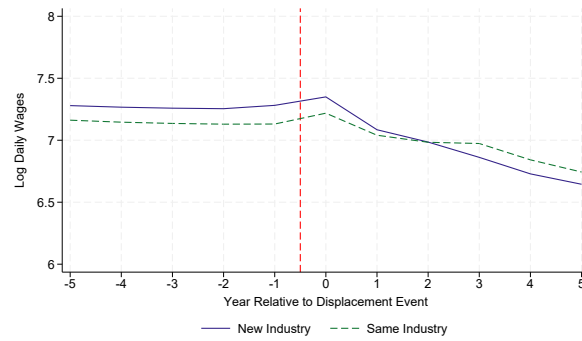
Notes: This figure displays the share of establishments experiencing a drop in employment of 30% or more for the years 1981-2022. The sample is all private establishments with 20 or more employees in the year before. The red diamonds show years used as displacement years in the analysis, and the gray bars show years with recessions in Denmark. Recessions are defined using the definition from [Statistics Denmark \(2022\)](#).

Figure A.3: The effect of job loss on additional labor market outcomes over the life cycle



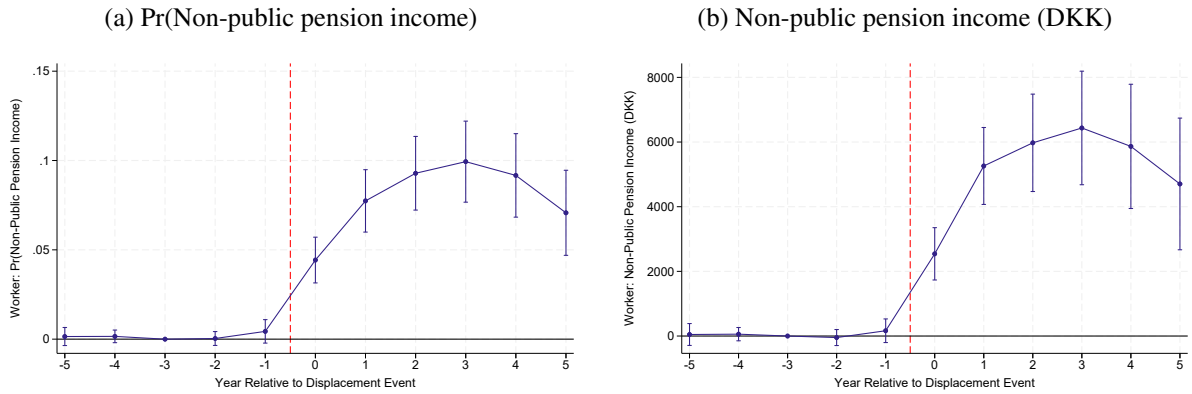
Notes: This figure displays the estimates from Equation 1 of job loss on the probability of positive earnings in panel (a), the probability of re-employment (i.e., working at a new plant) in panel (b), hours worked (%) in panel (c), the logarithm of daily wages in panel (d), the probability of switching industry in panel (e), and the probability of being out of the labor force in panel (f) for workers by five-year age-at-base-year bins. "Out of labor force" is defined as an indicator variable for not having positive labor earnings from that point on. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.4: Logarithm of daily wages for displaced older workers by industry transfer



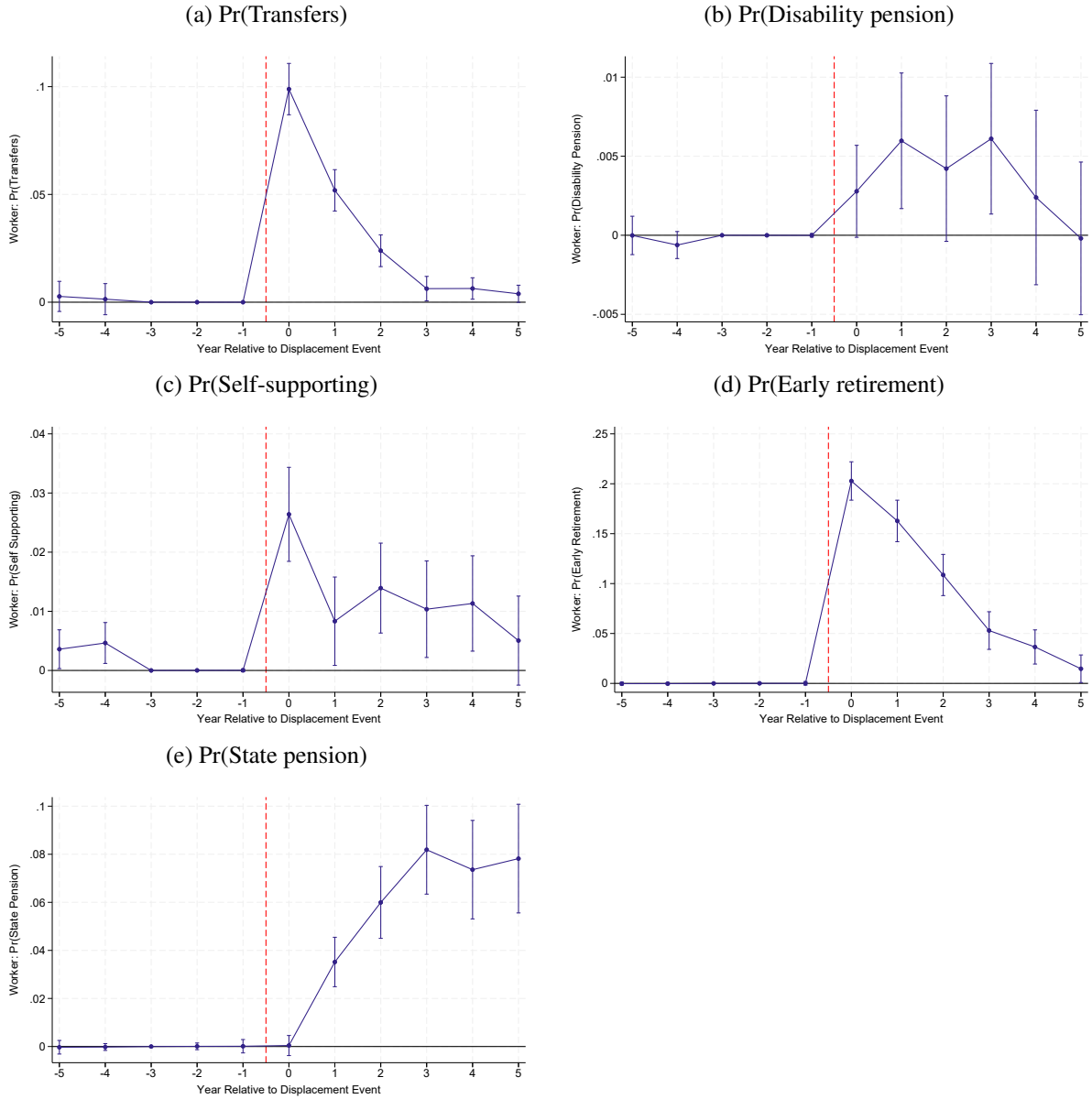
Notes: This figure displays the logarithm of daily wages for displaced older workers by whether they switched industry or not after re-employment in the post-displacement period ($t = 0$ to $t = 5$). Older workers are defined as workers aged 60 to 64 at the time of job loss.

Figure A.5: The effect of job loss on non-public pension income



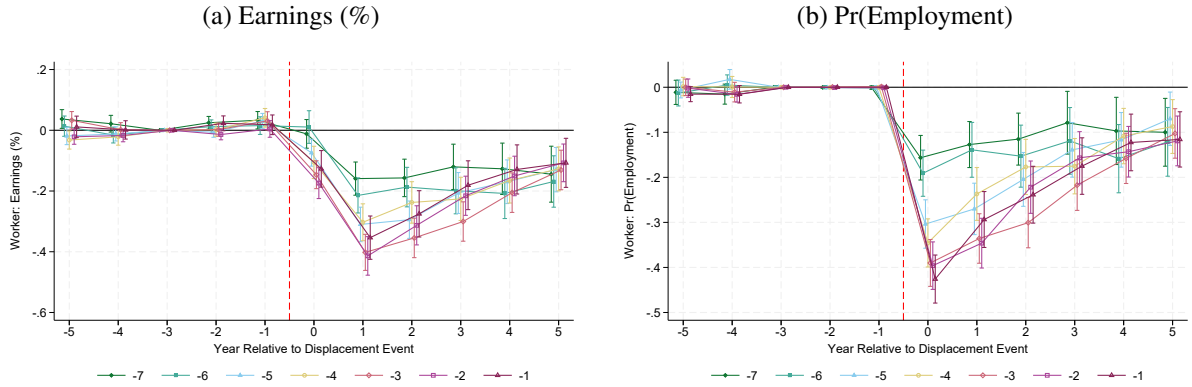
Notes: This figure displays the estimates from Equation 1 of job loss on the probability of having non-public pension income in panel (a) and non-public pension income (DKK) in panel (b) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.6: The effect of job loss on labor market attachment for older workers



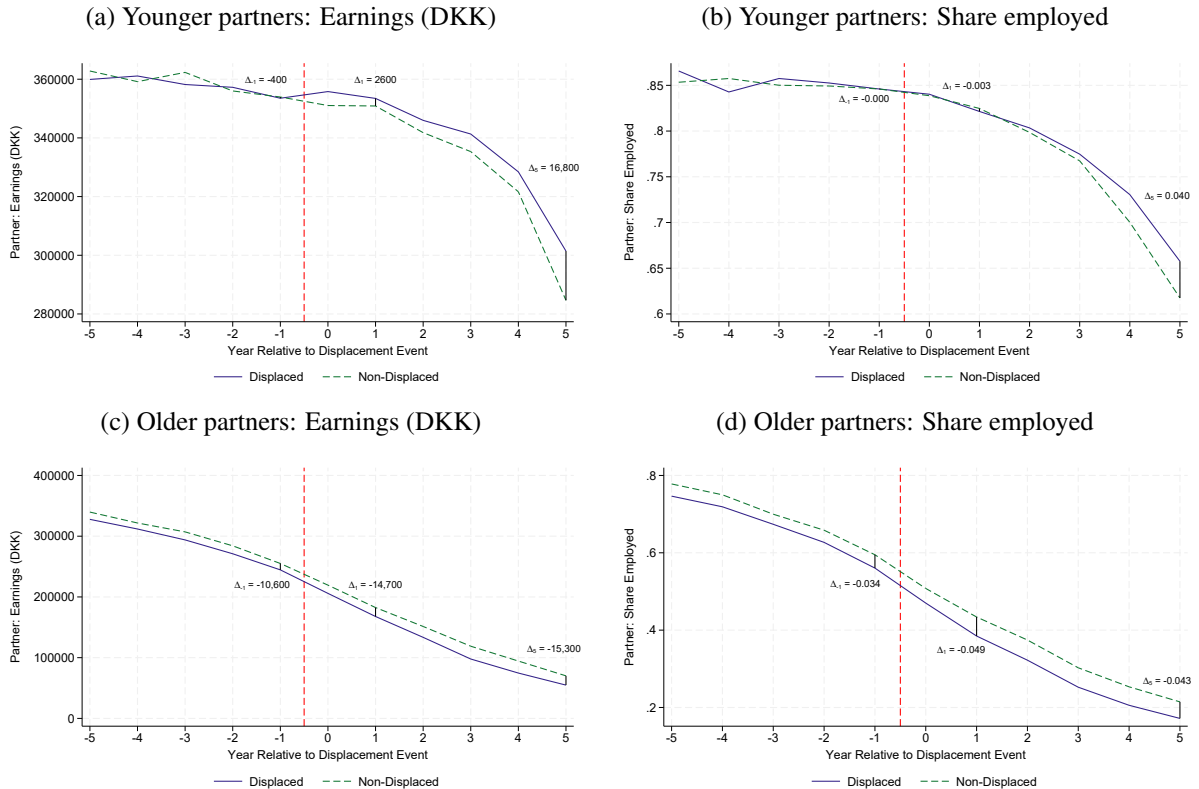
Notes: This figure displays the estimates from Equation 1 of job loss on the probability of receiving transfers in panel (a), disability pension in panel (b), being self-supporting in panel (c), being on early retirement benefits in panel (d), and being on state pension in panel (e) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.7: The effect of job loss on labor market outcomes by distance to state pension



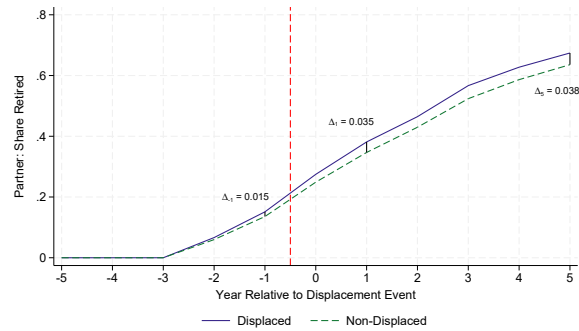
Notes: This figure displays the estimates from Equation 1 of job loss on earnings in % in panel (a) and the probability of being employed in panel (b) for workers by one-year bins by distance to the state pension eligibility age at the base year. Sample is workers aged 60 to 64 at the time of job loss. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.8: Earnings and employment for partners



Notes: This figure displays the average earnings (in DKK, 2024-prices) and share employed for partners of displaced and non-displaced older workers from five years before to five years after the displacement base year. Older workers are defined as workers aged 60 to 64 at the time of job loss. Younger partners are defined as partners under the age of 60 at the time of job loss, and older partners are defined as partners aged 60 or older at the time of job loss.

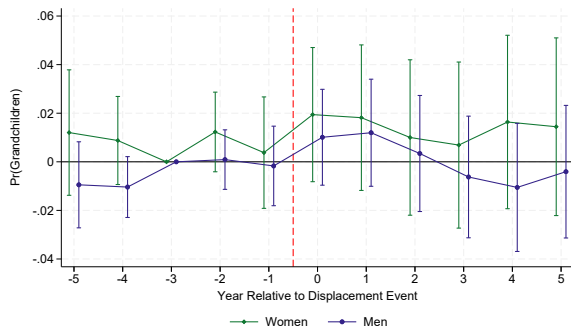
Figure A.9: Older partners previously employed: Share retired



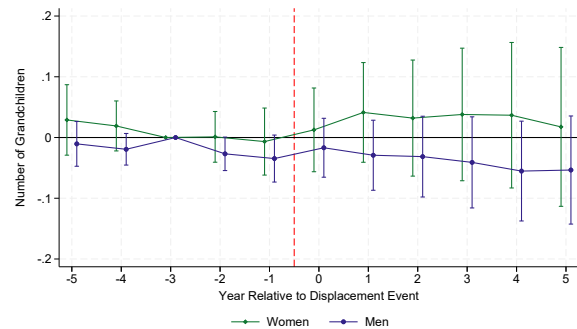
Notes: This figure displays the share retired (early retirement and state pension) from five years before to five years after the displacement base year for older partners previously employed. The sample is households with worker aged 60 to 64 and partner aged 60 or older at the time of job loss who was employed in $t^* - 3$.

Figure A.10: The effect of job loss on grandchildren

(a) Pr(Grandchildren)

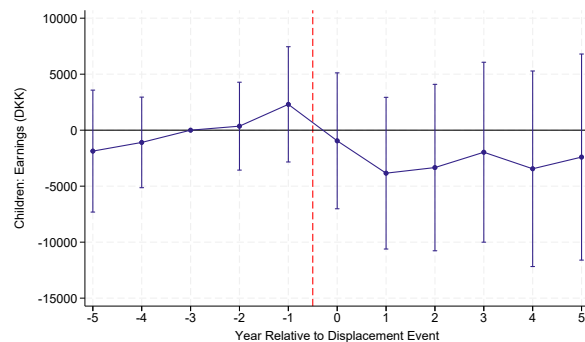


(b) Grandchildren (number)



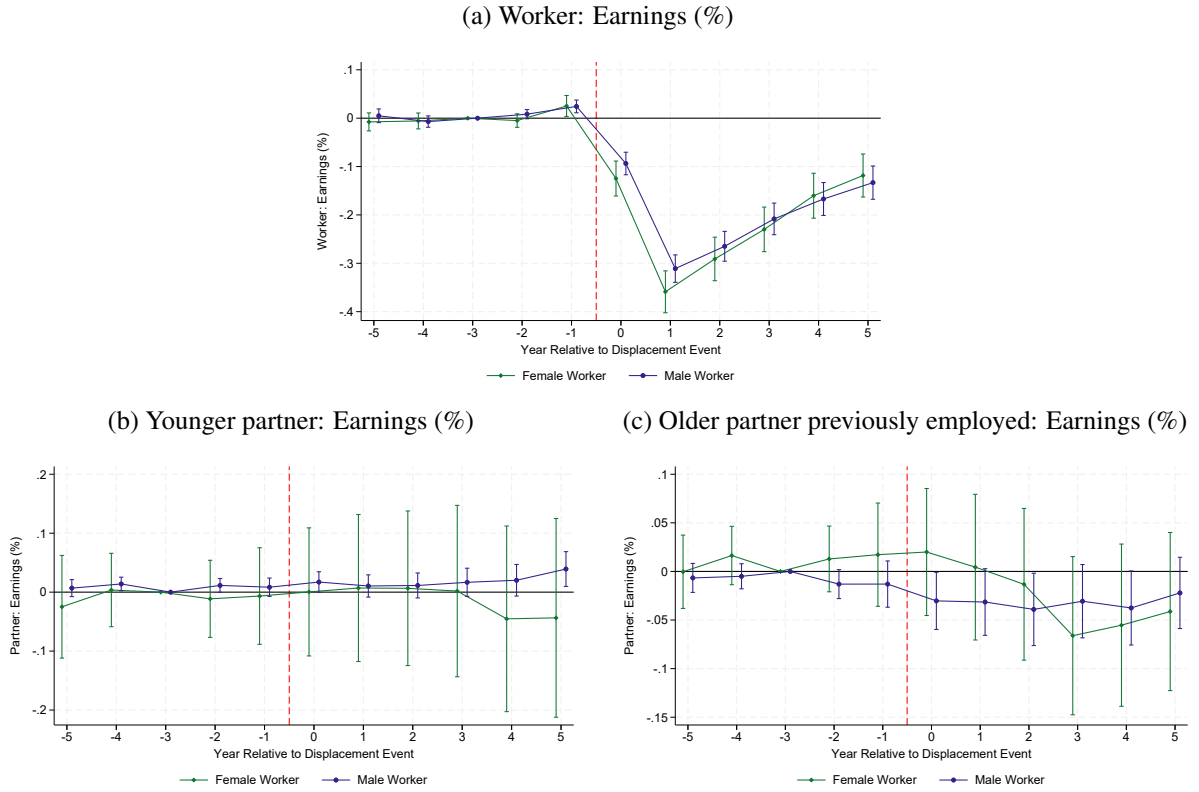
Notes: This figure displays the estimates from Equation 1 of job loss on the probability of grandchildren in panel (a) and number of grandchildren in panel (b) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.11: The effect of job loss on children's earnings



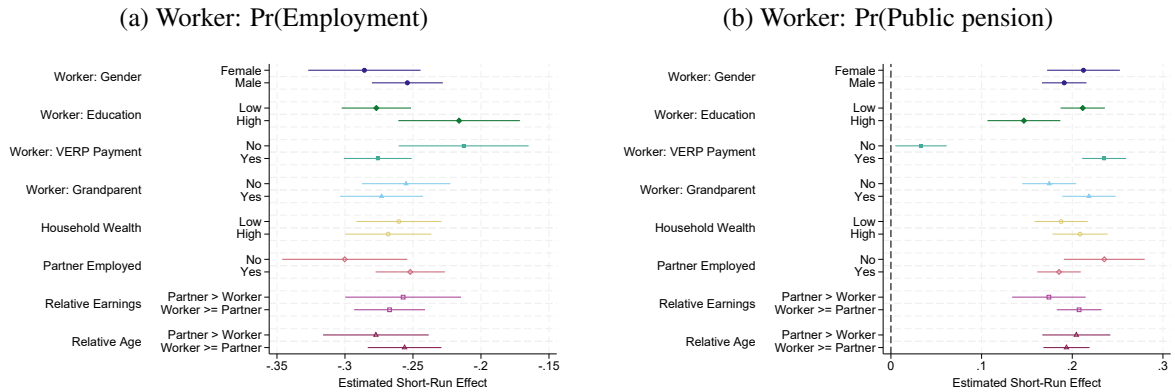
Notes: This figure displays the estimates from Equation 1 of job loss on older workers' adult children's earnings in DKK. The sample includes adult children (above age 18) of older workers (defined as workers aged 60 to 64 at the time of job loss). Control variables included are household fixed effects, year fixed effects, worker's age squared, partner's age squared, and child's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.12: The effect of job loss on earnings by gender



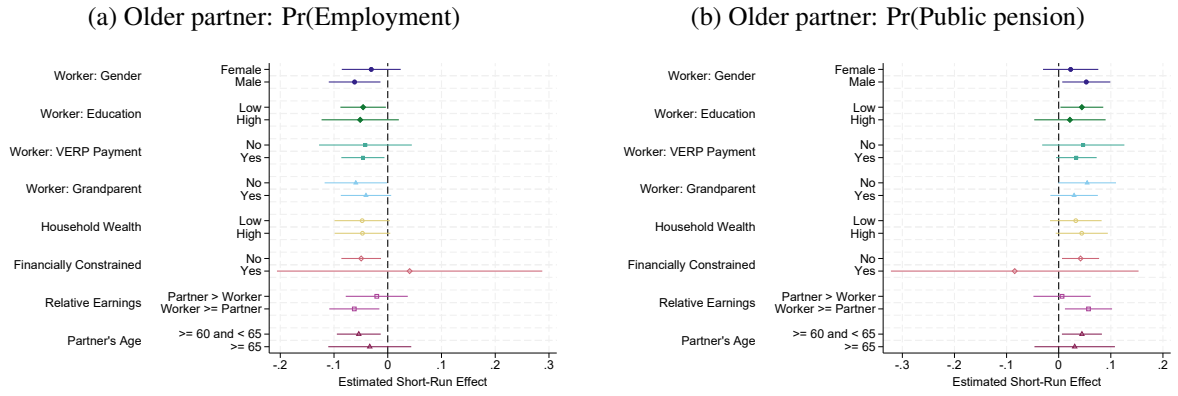
Notes: This figure displays the estimates from Equation 1 of job loss on worker's earnings (%) in panel (a), younger partner's earnings (%) in panel (b), and previously employed older partner's earnings (%) in panel (c). Sample is households with workers aged 60 to 64 at the time of job loss. Younger partners are defined as partners under the age of 60 at the time of job loss, and older partners are partners aged 60 or older at the time of job loss employed in $t^* - 3$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.13: Short-run heterogeneous treatment effects for older workers



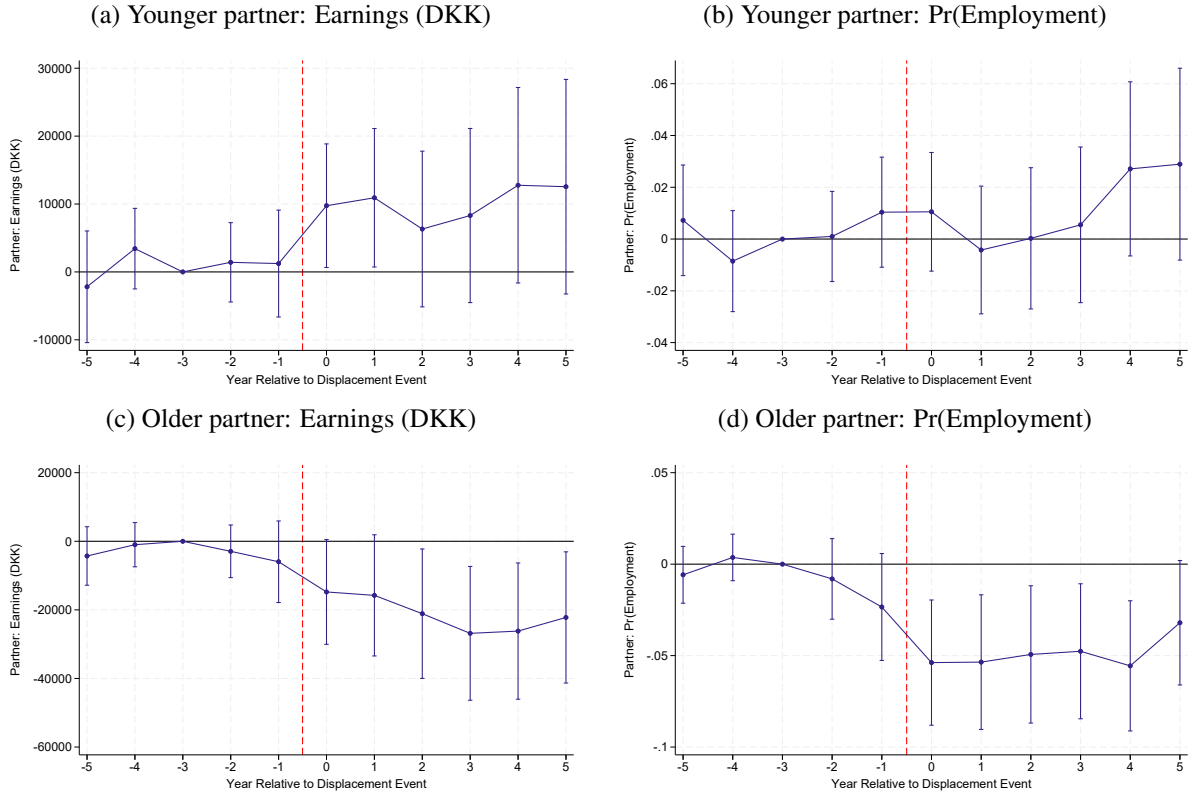
Notes: This figure displays the estimates from Equation 1 of job loss on probability of employment in panel (a) and receiving public pension benefits in panel (b) for older workers one year after job loss (short-run effect). Older workers are defined as workers aged 60 to 64 at the time of job loss. All dimensions of heterogeneity are measured in $t^* - 3$, except for VERP payment which is measured at age 55. High education is college and above, and high household (HH) wealth is median HH wealth or above. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.14: Short-run heterogeneous treatment effects for older partners previously employed



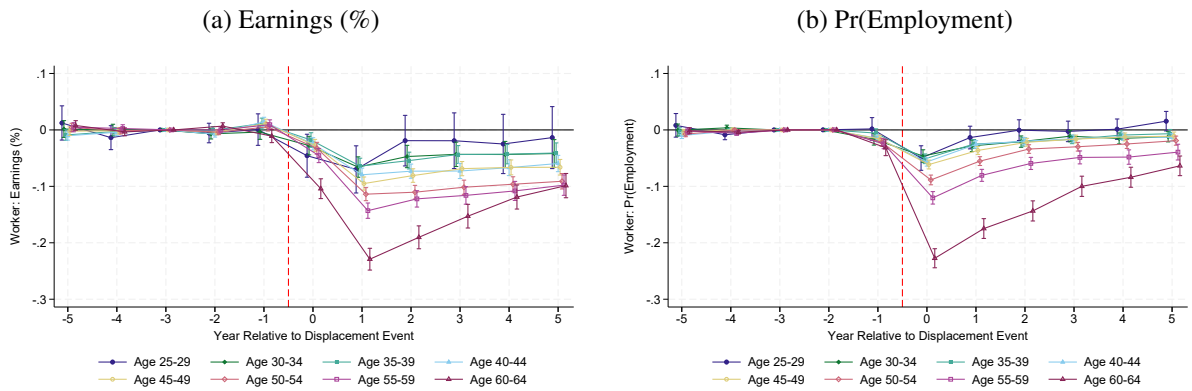
Notes: This figure displays the estimates from Equation 1 of job loss on partners' probability of employment in panel (a) and partner's probability of receiving public pension benefits in panel (b) for older partners one year after job loss (short-run effect). The sample is households with worker aged 60 to 64, and older partners are partners aged 60 or older at the time of job loss employed in $t^* - 3$. All dimensions of heterogeneity are measured in $t^* - 3$, except for partner's age which is measured in t^* and VERP payment measured age 55. High education is college and above, and high household (HH) wealth is median HH wealth or above. Financially constrained is when household assets are lower than monthly household disposable income, inspired by [He and Le Maire \(2023\)](#). Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.15: Robustness check: Balancing on partner's labor market outcomes in $t^* - 3$



Notes: This figure displays the estimates from Equation 1 of job loss on partner's earnings (DKK) in panel (a) and partner's probability of employment in panel (b) for younger partners (under the age of 60 at the time of job loss) and for partner's earnings (DKK) in panel (c) and partner's probability of employment in panel (d) for older partners previously employed (aged 60 or above at the time of job loss and employed in $t^* - 3$). Sample is households with worker aged 60 to 64 at the time of job loss. In addition to variables mentioned in Subsection 2.4, comparison households are also exactly balanced on partner's employment status in $t^* - 3$ and balanced on spousal earnings (in DKK) in $t^* - 3$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Figure A.16: Robustness check: Separations prior to displacement event



Notes: This figure displays the estimates from Equation 1 of job loss on earnings in % in panel (a) and the probability of being employed in panel (b) for workers by five-year age-at-base-year bins. Job separations in $t^* - 1$ are included too. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

A.2 Tables

Table A.1: Job displacements by local labor market

Local labor market	Share displaced
Aabenraa	1.2%
Aalborg	1.6%
Aarhus	1.7%
Aeroe	1.1%
Bornholm	1.4%
Esbjerg	1.4%
Frederikshavn	1.8%
Grenaa	1.6%
Herning	1.6%
Hjoerring	1.9%
Holstebro	1.6%
Horsens	1.4%
Koebenhavn	1.8%
Kolding	1.4%
Lemvig	1.2%
Naestved	1.8%
Nakskov	1.9%
Nykoebing F.	2.0%
Odense	2.0%
Randers	1.9%
Ringkoebing & Skjern	1.3%
Skive	2.2%
Slagelse & Holbaek	1.6%
Soenderborg	1.0%
Svendborg	2.4%
Thisted & Nykoebing M.	1.4%
Toender	1.3%
Vejle & Fredericia	1.3%
Viborg	3.0%

Notes: This table shows the average probability of job loss for the years 2013 to 2017 by local labor markets for the sample. Danish local labor markets are defined like [Statistics Denmark \(2016\)](#).

Table A.2: Summary statistics for treated and comparison households

	Comparison	Treated	Difference
<i>Worker:</i>			
Yearly earnings in $t^* - 2$ (DKK)	532,826.812 (270,379.562)	537,074.250 (289,628.469)	4,247.434* (p = 0.07)
Yearly earnings in $t^* - 3$ (DKK)	518,440.344 (269,677.688)	522,547.812 (288,930.469)	4,107.450* (p = 0.08)
Age in t^* (years)	46.202 (9.878)	46.202 (9.878)	-0.000 (p = 1.00)
Male (0/1)	0.647 (0.478)	0.647 (0.478)	-0.000 (p = 1.00)
Full time (0/1)	0.870 (0.337)	0.870 (0.337)	0.000 (p = 1.00)
Establishment size (employees)	386.562 (813.834)	399.350 (969.737)	12.788* (p = 0.08)
Tenure (years)	7.349 (6.176)	7.334 (6.399)	-0.015 (p = 0.77)
Manufacturing (0/1)	0.266 (0.442)	0.252 (0.434)	-0.014*** (p = 0.00)
Services (0/1)	0.214 (0.410)	0.221 (0.415)	0.007** (p = 0.05)
Other industries (0/1)	0.520 (0.500)	0.527 (0.499)	0.007* (p = 0.08)
<i>Household:</i>			
Local unemployment rate	0.043 (0.009)	0.043 (0.009)	0.000 (p = 0.17)
Children (0/1)	0.864 (0.343)	0.863 (0.343)	-0.000 (p = 0.92)
Duration of cohabitation (years)	15.454 (8.873)	15.419 (8.873)	-0.035 (p = 0.63)
Partner's age in t^* (years)	45.845 (10.476)	45.830 (10.473)	-0.015 (p = 0.86)
<i>No. of individuals</i>	29,372	29,372	

Notes: This table displays means and standard deviations for treated and comparison households for selected variables and the difference between the two groups for the full sample of workers aged 25-64 at the displacement base year (t^*). Variables are measured $t^* - 1$ if not otherwise specified. All monetary values are measured in DKK (2024-prices). Standard deviations are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.3: The effect of job loss on labor market outcomes over the life cycle

	Age 25-29 (1)	Age 30-34 (2)	Age 35-39 (3)	Age 40-44 (4)	Age 45-49 (5)	Age 50-54 (6)	Age 55-59 (7)	Age 60 to 64 (8)
Panel A: Earnings (DKK)								
One year-effect	-37,005.6*** (7662.9)	-44,595.7*** (5063.3)	-57,668.5*** (4453.1)	-68,783.5*** (4447.9)	-75,969.0*** (4665.5)	-88,207.6*** (4377.7)	-99,817.4*** (4696.9)	-164,394.1*** (6190.1)
Five year-effect	-20,177.6** (10,236.2)	-29,162.1*** (6738.8)	-36,544.4*** (5740.7)	-37,686.8*** (5463.3)	-55,576.7*** (5610.3)	-67,157.0*** (5133.7)	-62,785.6*** (6466.7)	-65,764.5*** (7321.4)
No. of observations	27,279	62,790	89,246	103,993	102,537	101,829	80,794	69,954
No. of individuals	2524	5794	8202	9525	9393	9352	7448	6506
R ²	0.62	0.72	0.77	0.83	0.83	0.84	0.82	0.75
Mean	292,172.15	409,311.94	489,957.81	566,881.22	582,091.20	564,718.24	540,844.12	508,641.43
Pct. change (One year)	-12.67	-10.90	-11.77	-12.13	-13.05	-15.62	-18.46	-32.32
Pct. change (Five years)	-6.91	-7.12	-7.46	-6.65	-9.55	-11.89	-11.61	-12.93
Panel B: Pr(Employment)								
One year-effect	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.04*** (0.00)	-0.05*** (0.00)	-0.08*** (0.01)	-0.12*** (0.01)	-0.26*** (0.01)
Five year-effect	0.01 (0.01)	-0.02*** (0.01)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.04*** (0.01)	-0.05*** (0.01)	-0.10*** (0.01)
No. of observations	27,279	62,790	89,246	103,993	102,537	101,829	80,794	69,954
No. of individuals	2524	5794	8202	9525	9393	9352	7448	6506
R ²	0.25	0.24	0.26	0.26	0.27	0.30	0.35	0.59
Mean	0.94	0.96	0.97	0.98	0.99	0.99	0.99	0.99

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on earnings in Panel A and the probability of being employed in Panel B for workers by five-year age-at-base-year bins. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. All monetary values are measured in DKK (2024-prices). Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.4: The effect of job loss on non-public pension income by early retirement eligibility

	Eligible in t^* (1)	Eligible in $t^* + 1$ (2)
One year-effect	4413.964*** (1596.479)	2880.623* (1748.186)
Five year-effect	5433.266** (2434.483)	4907.147* (2826.218)
No. of observations	11,314	5,674
No. of individuals	1050	526
R^2	0.52	0.51
Mean	988.73	1169.91

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on non-public pension income (DKK) for those who became eligible for early retirement in t^* in column (1) and for those who became eligible for early retirement in $t^* + 1$ in column (2). The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. All monetary values are measured in DKK (2024-prices). Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.5: The effect of job loss on wealth for older workers: Wealth Register

	HH assets Excl. PW (1)	HH assets Incl. PW (2)	HH liabilities (3)	HH wealth Incl. PW (4)
One-year effect	-8735.622 (55,345.062)	-38,311.290 (66,779.606)	-58,525.450 (38,380.306)	20,214.156 (58,766.126)
Five-year effect	-110,849.773* (59,935.166)	-227,408.746*** (72,938.333)	-65,827.462 (41,540.446)	-161,581.287** (63,685.349)
No. of observations	43,502	43,502	43,502	43,502
No. of individuals	6422	6422	6422	6422
R^2	0.96	0.97	0.90	0.97
Mean	3,494,979	6,612,966	1,441,170	5,171,796
Pct. change (One year)	-0.25	-0.58	-4.06	0.39
Pct. change (Five years)	-3.17	-3.44	-4.57	-3.12

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on household assets excluding pension wealth (DKK) in column (1), household assets including pension wealth (DKK) in column (2), household liabilities (DKK) in column (3), and household net wealth including pension wealth (DKK) in column (4). The sample is households with worker aged 60 to 64 at the time of job loss. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.6: The effect of job loss on wealth for older workers: Decomposition

	HH real assets (1)	HH financial assets (2)	HH pension wealth (3)	HH mortgage debt (4)	HH other debt (5)	HH public debt (6)
One-year effect	-60,244.826 (50,734.745)	51,509.203* (26,729.273)	-29,575.658 (27,611.749)	-68,852.383* (38,492.251)	10,284.022 (14,630.833)	42.909 (249.121)
Five-year effect	-86,522.432 (54,815.497)	-24,327.338 (29,495.172)	-116,558.978*** (30,758.428)	-85,058.209** (41,227.601)	19,133.844 (15,484.476)	96.902 (371.605)
No. of observations	43,502	43,502	43,502	43,502	43,502	43,502
No. of individuals	6422	6422	6422	6422	6422	6422
R^2	0.94	0.91	0.98	0.89	0.75	0.76
Mean	2,747,507	747,472	3,117,987	1,216,302	224,424	444
Pct. change (One year)	-2.19	6.89	-0.95	-5.66	4.58	9.67
Pct. Change (Year-Five)	-3.15	-3.25	-3.74	-6.99	8.53	21.83

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on household real assets (DKK) in column (1), household financial assets in column (2), household pension wealth in column (3), household mortgage debt in column (4), household other debt in column (5), and household public debt in column (6). The sample is households with worker aged 60 to 64. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.7: Pre-mass layoff establishment characteristics

Time relative to mass layoff (τ)	-5	-4	-3	-2	-1	Difference
Establishment size (employees)	44.772 (114.215)	45.055 (103.982)	46.064 (110.019)	46.303 (104.154)	46.087 (91.287)	1.315 (p = 0.33)
Earnings (DKK)	391,200.623 (169,680.188)	390,796.690 (169,857.281)	391,370.206 (172,458.156)	391,000.932 (173,824.750)	390,213.727 (175,611.672)	-986.896 (p = 0.68)
Male (0/1)	0.607 (0.281)	0.608 (0.279)	0.609 (0.278)	0.607 (0.276)	0.607 (0.275)	-0.000 (p = 0.94)
Age (years)	39.088 (7.853)	39.073 (7.812)	39.020 (7.850)	38.968 (7.836)	38.913 (7.861)	-0.175 (p = 0.10)
<i>N</i>	8174	9853	11,603	13,622	15,952	

Notes: This table displays means and standard deviations for establishments experiencing mass layoff five to one years prior to the mass layoff event. Column (6) is the difference between one year and five years prior to the mass layoff event. Sample is private establishments with at least 20 employees one year prior to experiencing a mass layoff. All monetary values are measured in DKK (2024-prices). *N* refers to the number of establishments. Standard deviations are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.8: The effect of job loss on labor market attachment for older partners previously employed:
Excluding couples working at same establishment pre-job loss

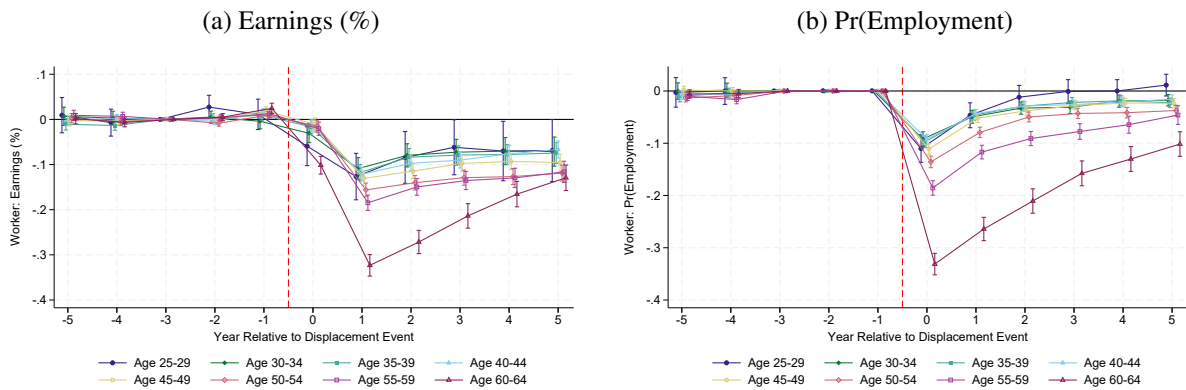
	Employment	Transfers	Disability pension	Self- supporting	Public pension
	(1)	(2)	(3)	(4)	(5)
One-year effect	-0.038** (0.019)	0.003 (0.005)	-0.001 (0.003)	0.008 (0.007)	0.029 (0.018)
Five-year effect	-0.041** (0.018)	0.002 (0.003)	0.003 (0.004)	0.002 (0.006)	0.033* (0.018)
No. of observations	28,957	28,957	28,957	28,957	28,957
No. of individuals	2682	2682	2682	2682	2682
R^2	0.59	0.18	0.42	0.33	0.61
Mean	0.93	0.02	0.00	0.01	0.04

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the partner's probability of being employed in column (1), the partner's probability of receiving transfers in column (2), the partner's probability of being on disability pension in column (3), the partner's probability of being self-supporting in column (4), and the partner's probability of receiving public pension benefits in column (5). The sample is households with worker aged 60 to 64 and partner aged 60 or older at the time of job loss employed in $t^* - 3$ excluding couples working at the same establishment in $t^* - 1$. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

A.3 Robustness check: Covid-19

I exclude the years 2020-2022 to avoid contamination of the Covid-19 pandemic. I show effects over the life cycle in Figure A.17, the effects for older workers' labor market attachment in Table A.9, and the effects of job loss on spousal labor supply for older partners in Table A.10.

Figure A.17: The effect of job loss on labor market outcomes over the life cycle



Notes: This figure displays the estimates from Equation 1 of job loss on earnings in % in panel (a) and the probability of being employed in panel (b) for workers by five-year age-at-base-year bins. The years 2020-2022 are excluded from the analysis. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Table A.9: The effect of job loss on labor market attachment for older workers

	Employment	Transfers	Disability pension	Self-supporting	Early retirement	State pension
	(1)	(2)	(3)	(4)	(5)	(6)
One-year effect	-0.264*** (0.011)	0.052*** (0.005)	0.006*** (0.002)	0.008** (0.004)	0.163*** (0.011)	0.035*** (0.005)
Five-year effect	-0.102*** (0.016)	0.004 (0.003)	-0.001 (0.002)	-0.001 (0.003)	0.002 (0.009)	0.098*** (0.018)
No. of observations	62,661	62,661	62,661	62,661	62,661	62,661
No. of individuals	6506	6506	6506	6506	6506	6506
R^2	0.59	0.22	0.33	0.23	0.40	0.55
Mean	0.99	0.01	0.00	0.00	0.00	0.00

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the probability of being employed in column (1), the probability of receiving transfers in column (2), the probability of being on disability pension in column (3), the probability of being self-supporting in column (4), the probability of receiving early retirement benefits in column (5), and the probability of receiving state pension benefits in column (6) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. The years 2020-2022 are excluded from the analysis. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.10: The effect of job loss on labor market attachment for older partners previously employed

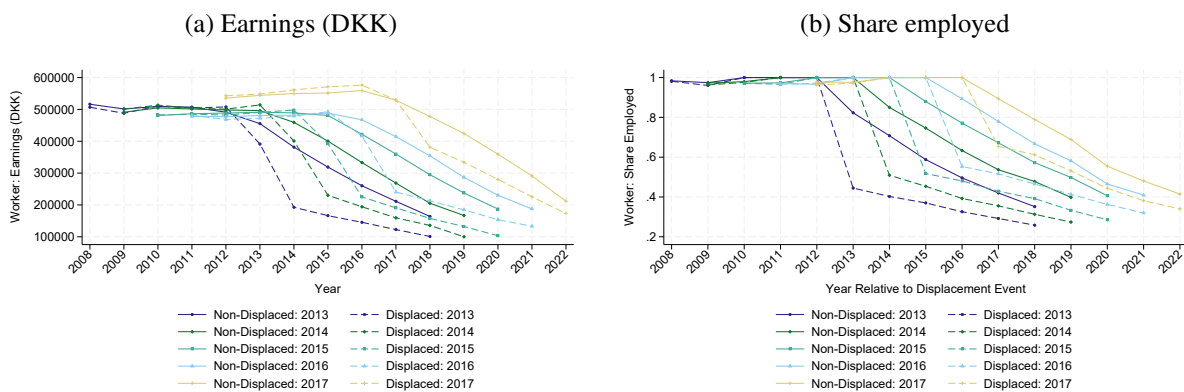
	Employment	Transfers	Disability pension	Self-supporting	Public pension
	(1)	(2)	(3)	(4)	(5)
One-year effect	-0.047** (0.019)	0.004 (0.005)	-0.002 (0.003)	0.007 (0.007)	0.039** (0.018)
Five-year effect	-0.008 (0.024)	0.002 (0.005)	0.000 (0.003)	0.001 (0.005)	0.005 (0.025)
No. of observations	26,720	26,720	26,720	26,720	26,720
No. of individuals	2791	2791	2791	2791	2791
R^2	0.58	0.21	0.44	0.32	0.60
Mean	0.93	0.02	0.00	0.01	0.04

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the partner's probability of being employed in column (1), the partner's probability of receiving transfers in column (2), the partner's probability of being on disability pension in column (3), the partner's probability of being self-supporting in column (4), and the partner's probability of receiving public pension benefits in column (5). The sample is households with worker aged 60 to 64 and partner aged 60 or older at the time of job loss who was employed in $t^* - 3$. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. The years 2020-2022 are excluded from the analysis. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

A.4 Robustness check: Heterogeneity by displacement year

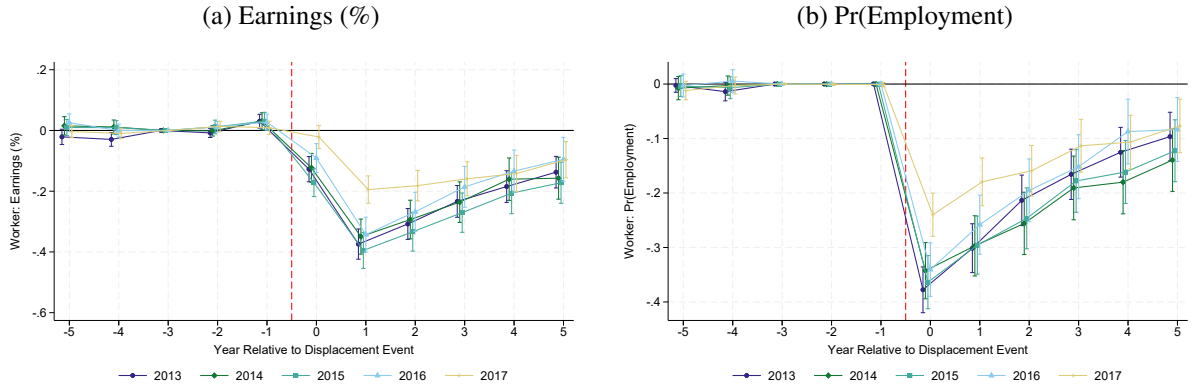
In this section, I show earnings and employment descriptively over time for older workers by their displacement year in Figure A.18, and I show the effects of job loss on earnings and probability of employment for older workers by displacement year in Figure A.19.

Figure A.18: Earnings and employment for older workers by displacement year



Notes: This figure displays the average earnings (in DKK, 2024-prices) in panel (a) and share employed in panel (b) for displaced and non-displaced older workers by displacement base year. Older workers are defined as workers aged 60 to 64 at the time of job loss.

Figure A.19: The effect of job loss on labor supply for older workers by displacement year



Notes: This figure displays the estimates from Equation 1 of job loss on earnings in % in panel (a) and the probability of being employed in panel (b) for older workers by displacement year. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Older workers are defined as workers aged 60 to 64 at the time of job loss. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

A.5 Robustness check: Total population

In this section, I repeat the analysis for workers for the full population (couples and singles). The sample is workers aged 25 to 64 years old at the displacement base year and where the worker has at least two years tenure at a private establishment with at least 20 employees one year prior to the base year. I use exact matching on one-year age bins, displacement base year (t^*), and gender. I then use 1:1 Nearest Neighbor PSM with no replacement where I match on the following worker characteristics measured in $t^* - 1$: Dummy for children, dummy for working full time, industry groups, tenure, employer size, local labor market unemployment rate, and earnings in $t^* - 2, t^* - 3$.

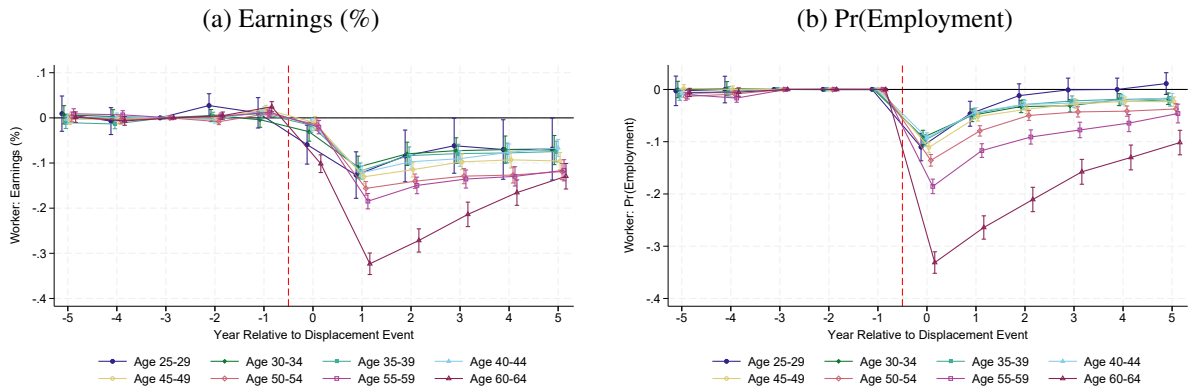
I then estimate an event study model with fixed effects for individual j at time t :

$$y_{jt} = \alpha_j + \lambda_t + \sum_{\tau=-5}^{\tau=5} \gamma_{\tau} \mathbf{1}\{t = t_j^* + \tau\} + \sum_{\tau=-5}^{\tau=5} \theta_{\tau} \mathbf{1}\{t = t_j^* + \tau\} \times Treated_j + X'_{jt} \beta + \varepsilon_{jt} \quad (1)$$

where t_j^* is the base year for the job loss event, and τ is years relative to the base year. y_{jt} is the dependent variable (labor market outcomes for worker), $\mathbf{1}\{\cdot\}$ is an indicator function, and $Treated_j$ is a dummy variable equal to 1 when the worker loses a job in a mass layoff event and 0 otherwise, X_{jt} includes worker's age squared, α_j is individual fixed effects which control for time-invariant observed and unobserved characteristics of the individual, λ_t is year fixed effects, and ε_{jt} is the residual error term. I cluster standard errors at the individual level.

I show the effect of job loss on earnings and employment over the life cycle in [Figure A.20](#), and I show the effect of job loss on labor market attachment for older workers in [Table A.11](#).

Figure A.20: The effect of job loss on labor market outcomes over the life cycle: Full population



Notes: This figure displays the estimates from Equation 1 of job loss on earnings in panel (a) and the probability of being employed in panel (b) for workers by five-year age-at-job-loss bins. Control variables included are individual fixed effects, year fixed effects, and worker's age squared. Standard errors are clustered at the individual level, and 95% confidence intervals are shown.

Table A.11: The effect of job loss on labor market attachment for older workers: Full population

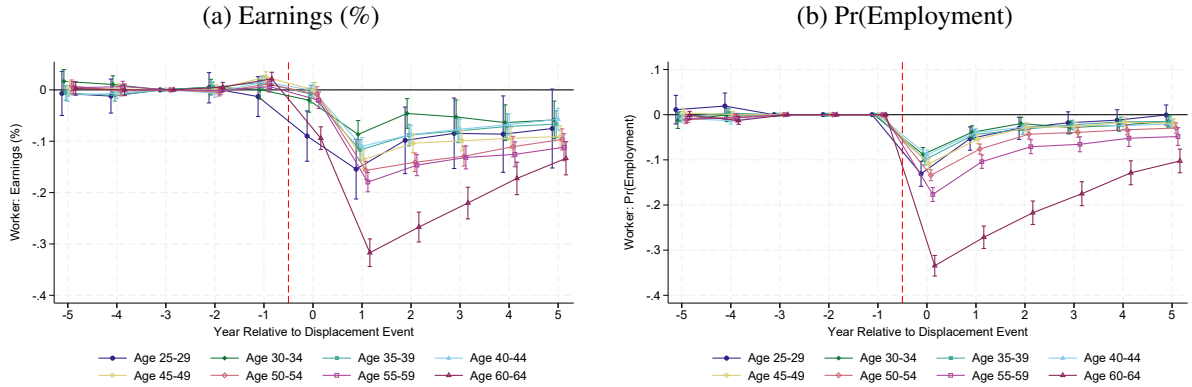
	Employment	Transfers	Disability pension	Self-supporting	Early retirement	State pension
	(1)	(2)	(3)	(4)	(5)	(6)
One-year effect	-0.287*** (0.010)	0.054*** (0.005)	0.007*** (0.002)	0.015*** (0.003)	0.180*** (0.009)	0.031*** (0.005)
Five-year effect	-0.097*** (0.010)	-0.001 (0.002)	0.005* (0.003)	0.005 (0.003)	0.005 (0.006)	0.082*** (0.010)
No. of observations	92,522	92,522	92,522	92,522	92,522	92,522
No. of individuals	8517	8517	8517	8517	8517	8517
R ²	0.59	0.21	0.30	0.28	0.38	0.57
Mean	0.99	0.01	0.00	0.00	0.00	0.00

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the probability of being employed in column (1), the probability of receiving transfers in column (2), the probability of being on disability pension in column (3), the probability of being self-supporting in column (4), the probability of receiving early retirement benefits in column (5), and the probability of receiving state pension benefits in column (6) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are individual fixed effects, year fixed effects, and worker's age squared. Standard errors are clustered at the individual level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

A.6 Robustness check: Establishment size restriction

In this section, I vary the establishment size restriction from 20 to 30 employees. I show the effect of job loss on earnings and employment over the life cycle in Figure A.21, and I show the effect of job loss on labor market attachment for older workers in Table A.12. Furthermore, I show the effect of job loss on labor market attachment for older partners in Table A.13.

Figure A.21: The effect of job loss on labor market outcomes over the life cycle:
Establishment size restriction



Notes: This figure displays the estimates from Equation 1 of job loss on earnings in panel (a) and the probability of being employed in panel (b) for workers by five-year age-at-job-loss bins. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level, and 95% confidence intervals are shown.

Table A.12: The effect of job loss on labor market attachment for older workers:
Establishment size restriction

	Employment	Transfers	Disability pension	Self-supporting	Early retirement	State pension
	(1)	(2)	(3)	(4)	(5)	(6)
One-year effect	-0.272*** (0.013)	0.053*** (0.006)	0.009*** (0.002)	0.004 (0.004)	0.172*** (0.012)	0.033*** (0.006)
Five-year effect	-0.102*** (0.013)	0.003 (0.003)	0.001 (0.003)	0.007 (0.004)	0.011 (0.008)	0.081*** (0.013)
No. of observations	55,830	55,830	55,830	55,830	55,830	55,830
No. of individuals	5188	5188	5188	5188	5188	5188
R^2	0.59	0.21	0.30	0.28	0.39	0.56
Mean	0.99	0.01	0.00	0.00	0.00	0.00

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the probability of being employed in column (1), the probability of receiving transfers in column (2), the probability of being on disability pension in column (3), the probability of being self-supporting in column (4), the probability of receiving early retirement benefits in column (5), and the probability of receiving state pension benefits in column (6) for older workers. Older workers are defined as workers aged 60 to 64 at the time of job loss. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table A.13: The effect of job loss on labor market attachment for previously employed older partners:
Establishment size restriction

	(1) Employment	(2) Public pension
One-year effect	-0.040* (0.021)	0.020 (0.020)
Five-year effect	-0.033* (0.019)	0.014 (0.020)
No. of observations	24,174	24,174
No. of individuals	2242	2242
R^2	0.59	0.61
Mean	0.93	0.05

Notes: This table displays the estimates from Equation 1 of the effect of job loss one and five years after the displacement event on the probability of being employed in column (1) and the probability of receiving public pension benefits in column (2) for older partners employed pre-job loss. The sample is households with worker aged 60 to 64 and partner aged 60 or older at the time of job loss who was employed in $t^* - 3$. The mean is the pre-job loss mean of the variable measured from $t^* - 5$ to $t^* - 1$. Control variables included are household fixed effects, year fixed effects, worker's age squared, and partner's age squared. Standard errors are clustered at the household level and are shown in parentheses. Significance levels are indicated as * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

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